REPLACEMENT SHEET

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ligation of ssDNA

## ligation of duplex DNA

(SEQ ID NO:12) CTAGTCCAAAGTGCTCGG (SEQ ID NO:13)

(SEQ ID NO:15) TGTACGCTGGATGCA  $^{\mathrm{T}}$ TCATGCGACCT TCCAGCGTAC T ACGTAGGTCGCATG  $T^T$ (SEQ ID NO:15)

GATCAGGT<sub>S</sub>TTCACGAGCCTG (SEO ID NO:14)

ŢĄCGTAGGTCGCAT ${
m G}$   ${
m T}$ (SEQ ID NO:16)

## one pot ligation / cyclization of ssDNA

(SEQ ID NO:17) GTTTTATACAAAACCTGGCA

(SEQ ID NO:18) T(SEQ ID NO:19) CTGCTTCACTAGT AGTGATCAAGTCCTCTGA (SEQ ID NO:20)

> $_{
> m T}$ TCAGCAAAATATGT $_{
> m s}$ TTTGGACCGTTGGT $_{
> m T}$ (SEQ ID NO:21)  $^{
> m T}$ CTGCTTCACTAGT $_{
> m s}$ TCAGGAGACTGTTCA $^{
> m G}$

> > Fig. 4a

rxn.type	conversion	isolated yield
ssDNA ligation	>90%	44%
duplex ligation	75%	36%
ligation/cyclization	>90% (1st step) 50% (2nd step)	20%

 $\mathcal{F}ig.~4b$